The Microburst

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The Winter 2005 Microburst

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Editor of the Microburst, Senior Forecaster, NWS Upton NY

Winter has arrived, though it took a while. January started out about 10 degrees above normal, but we gave all of that back after mid-month. So, what does the rest of the winter have in store for us?

First off, a weak El Nino is in progress. Winter El Niños typically feature a strong jet stream and storm track across the southern U.S., and less storminess and milder-than-normal conditions across the North.

During weak El Niños, another player can have an impact on our weather…the North Atlantic Oscillation (NAO). The NAO is a large-scale mode of natural climate variability having large impacts on weather and climate in the North Atlantic region. Strong negative NAO phases tend to be associated with below-normal temperatures here in the East. For more info on the NAO or El Niño, see the Climate Prediction Center's homepage (see the Links Section of the newsletter).

As evidenced by the January 22-23 snowstorm, our spotters came through for us once again. Your reports helped us out tremendously as always.

INSIDE THE WINTER 2005 EDITION OF THE MICROBURST

Building a Better SKYWARN Program

New York City…the city that never sleeps. Over 8 million people in a 5 borough area. One of the more challenging areas to verify severe weather in?!?

How's this for one reason…in the 5 boroughs, we have a grand total of 252 spotters, 85 of which are hams. If you stop and think about it, that's a really small number of spotters for such a densely populated area. For a comparison, Bergen County New Jersey, home of one of our strongest county level SKYWARN programs, has a population of just under 1 million people. We have 145 trained spotters (65 hams), and the NWS receives as many or more reports from that county as from any other county in our Warning Area. Similar scenarios are true for many other counties in our area. Why is that the case? Over the past few years, much time and effort has gone into building Bergen SKYWARN. The NWS (and our customers) reap the benefits.

So, what do we do next?

In order to build up the SKYWARN Program in New York City, we have begun a new initiative, which is something a little different in Tri-State SKYWARN, but is not at all for NWS Upton. First of all, we have a new SKYWARN Coordinator in place, Ed Iacono WA2EQH. The rebuilding of NYC SKYWARN will be accomplished by way of an expanded partnership between NWS Upton, NYC Amateur Radio Emergency Services (NYC ARES), and the NYC Office of Emergency Management (NYC OEM). Other served agencies such as the American Red Cross and the Salvation Army Team Emergency Radio Network, and other emergency personnel groups may also play a major role in this. We hope to announce more details on this new partnership in the Spring Edition of the Microburst, tentatively scheduled for late March.

An amateur radio communications plan is being developed for SKYWARN activations, and for training nets. Net control operators will be recruited, and if necessary, trained as spotters and for NCS duties. Once all of this is in place, then a public relations campaign will begin, including advertising Basic and Advanced Spotter Class Training dates and locations.

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Building a Better SKYWARN Program *… continued from page 1*

If you are wondering just what this means for you, we'll answer it this way. Accurate, and just as important, timely spotter reports help the NWS warn the public of impending weather events. Accurate reports allow NWS meteorologists to verify what is actually happening versus what we see on Doppler radar (and our other various observational systems).

By the way, this is for areas other than just New York City!

So, how can you get involved? First of all, if you have been trained as a spotter in the past, but it has been a while since your last training class, please come to another class this spring. We do require our spotters to receive training every 3 years or so, in order to stay current. If you have attended a class recently, perhaps an Advanced level class would be for you. We go into more detail and meteorology in that class than we do in the Basic level class.

The Spring Training schedule should be posted to the Upton SKYWARN web pages by the end of March. If you don't have internet access, then drop us a line, and we'll let you know when the classes will be held in your area. We also advertise the training classes on NOAA All-Hazards Radio a week or 2 in advance.

10 Questions

After a short hiatus, our popular "10 Questions" makes a return. See how well you know our Winter Weather Spotter and Watch/Warning/Advisory program criteria.

Define the difference between:

1) Freezing Rain Advisory vs. Ice Storm Warning (ice accretion)
2) Snow Advisory vs. Heavy Snow Warning (give answers for both 12 and 24 hour criteria)
3) Wind Chill Advisory vs. Wind Chill Warning
4) Wind Advisory vs. High Wind Warning (give answers for both sustained winds and gusts)

Define the following Spotter Reporting Criteria:

5) Snowfall (a total of 5 answers)
6) Ice/Sleet
7) Rainfall
8) Flooding
9) Wind

10) Define the criteria for a Blizzard (3 answers).

Tri-State SKYWARN Coordinator Updates

Several changes have been made amongst the Coordinator ranks recently. A full listing of local SKYWARN Coordinators is located on the Upton SKYWARN Web Page.

In Suffolk County, we welcome Walter Wenzel KA2RGI back as a Deputy Coordinator. Walter is a former Regional Coordinator. Also returning to the ranks is Gerry Miller AA2ZJ, who returns as a Union County NJ Deputy. Our other new Deputy Coordinator in Union County is Harry O'Donnell KB2MDO.

In Putnam County, Bob Schneider KC2CWT and Joel Rappaport WA2AWG have switched positions, with Bob taking over the primary Coordinator's position. And finally, in Fairfield County, Brent Hurlock N1RRD is our new Deputy for the northern part of the County. Welcome to all.

There are still several openings to be filled. If you are interested in a Coordinator position, please contact Scott KC2JCB for more information.

The Danger of Ice Jams

Nancy Figueroa
Service Hydrologist
NWS Upton NY

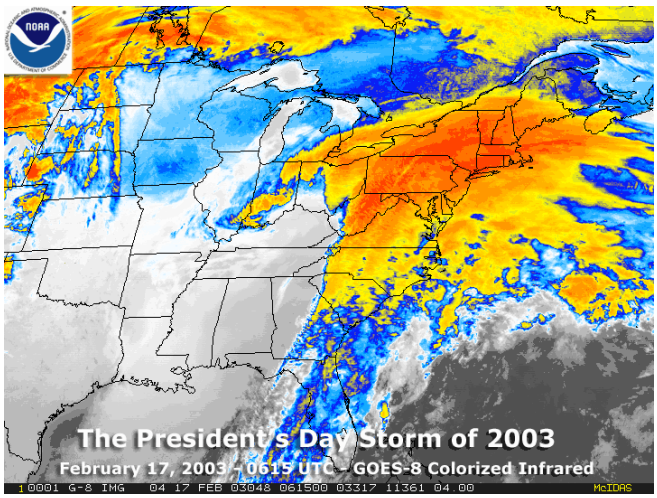
Scott Reynolds
Senior Forecaster
NWS Upton NY

During winter, large snow storms and cold weather leave many locations across the local area with a deep snow cover and frozen rivers. If heavy rain and unusually mild temperatures move into a location with a deep snow cover and frozen rivers, ice breaks up. These ice jams, which float downstream, often pile up near narrow passages, such as bridges, causing water to overflow the river banks and flood nearby homes and businesses.

If you observe an ice jam or flooding as a result of an ice jam, please alert the NWS. Let us know where the ice jam is, its size if possible, and extent of flooding observed.

A Look Back – The 2003 President's Day Storm

Joe Pollina
Student Trainee Meteorologist, NWS Upton NY



The President's Day Storm of 2003 will go down as one of the worst snow storms ever to impact the New York City metropolitan area. Anywhere from 12-30 inches of snow fell across the NWS Upton County Warning Area (CWA). The storm caused many road closures, cancelled flights, and some airport closures. The storm not only affected New York, but much of the Mid Atlantic and southern New England. Over a foot of snow fell over a large area, one of the most densely populated areas of the country.

The storm had its origins in early February. A split flow in the jet stream off the Pacific coast allowed cold arctic air to intrude the Pacific Northwest in the form of a high pressure system. The southern branch of the jet brought in energy into the southwestern U.S. in the form of an upper level low off the California coast on February 11th. As this low came ashore, it produced heavy rains and flash floods in California.

As the low was approaching the California coast, the cold, arctic high was progressing eastward, with its sites set on the eastern U.S. By February 15th, the high pressure was now centered over the Great Lakes region. The central pressure was 1030 mb, abnormally strong high for that time of year. By February 17th, the high pressure began to slowly retreat to the northeast, heading for southeast Canada.

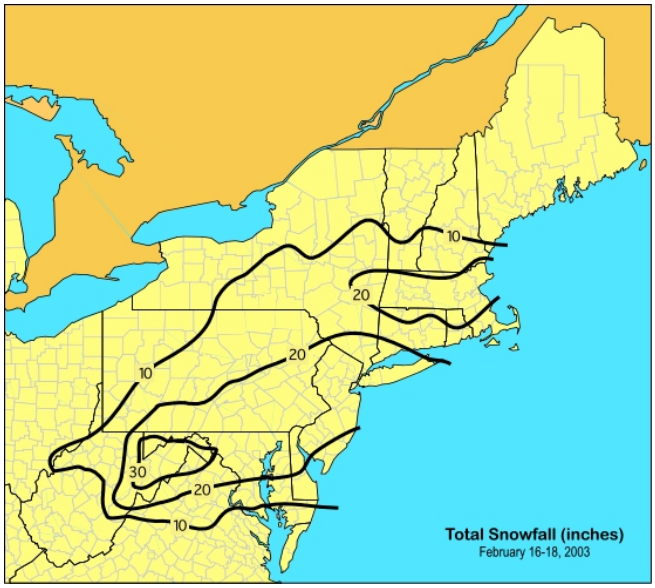
Meanwhile, the low that had slammed into the California coast was progressing eastward as well. As the low pressure began to interact with the cold air from the high pressure to its north, snow began to break out over the Mississippi and Ohio valleys. It even set some records in these areas as well.

The ingredients for a major winter storm for the New York metro area was there: strong high pressure (with its unseasonably cold air), and a developing low pressure system. As the low entered the Midwest, a secondary low began to form off the Mid-Atlantic coast on the 16th. This second low, which got much of its energy from the low from the Midwest, then traveled northeastward, a classic track for a nor'easter. By the 16th, snow began to break out around the New York metro area associated with the Midwest low. On the 17th, snowfall rates of up to 4 inches per hour began to fall, associated with the developing coastal low.

While we were being pummeled by snow, parts of the Midwest and southern states had ice to contend with. The low was bringing up warmer air from the south in the mid levels of the atmosphere, but the cold air remained steadfast at the surface. As a result, freezing rain fell in parts of Illinois, Indiana, Ohio, Kentucky, West Virginia, Virginia, and the Carolinas. The heavy ice downed power lines, causing widespread power outages. In the south, where the air was warm throughout all levels of the atmosphere, plain rain fell, and lots of it. Floods and mudslides were common.

The heaviest snow that fell in our CWA was 30 inches, in Monroe in Orange County. New York City's official storm total (Central Park Zoo), was 19.8', a daily snowfall record for February 17th. Other snowfall amounts were 28" for Howard Beach in Queens, 24" inches in both Bohemia and Bridgehampton (Suffolk County), and 23.5" in Farmingdale (Nassau County). West Milford NJ (Passaic County) received 28", and 24" fell in New Fairfield, CT (Fairfield County). (See map below for snowfall totals.)

With these staggering snowfall totals and far reaching effects, the President's Day Storm of 2003 will not soon be forgotten.



Winter Weather Preparedness

Here is some preparedness information to help you to deal with whatever “Old Man Winter” dishes out...

Before The Storm:

Have the following available at home, just in case of a loss of power, heat, or telephone...

- Flashlights (and extra batteries).

- Battery-powered NOAA Weather Radio.

- Extra food, water, medicine and baby items. (Don’t forget about pets!)

- First-aid supplies.

- Sufficient heating fuel.

- Emergency heat source.

- Fire extinguisher.

For your vehicle, make sure you have the following...
- A full tank of gas.

- Shovel, windshield scraper, sand or cat litter for traction, rope.

- First-aid kit, knife.

- Extra clothing, blankets.

- Food, container for water, waterproof matches.

When Caught In A Winter Storm:

If you’re caught outside...
- Find shelter. (Try to stay dry and cover all exposed body parts.)

- If no shelter is available...build a wind break for protection from the wind and build a fire for heat and to attract attention.

- Melt snow for drinking water. (Eating snow will lower your body temperature.)

In your vehicle...
- Stay inside. You can become disoriented very quickly in wind-driven snow and cold.

- Run the engine about 10 minutes per hour for heat, and keep the dome light on at night while running the engine.

- Keep a window open for fresh air and to avoid carbon monoxide poisoning.

- Make sure the exhaust pipe is not blocked.

- Tie a colored (red if available) cloth to a door or antenna.

- Raise the hood after the snow stops to indicate that you need help.

- Keep your blood circulating and keep warm by moving around from time to time (arms, legs, fingers, toes).

At home...
- Stay inside. Be sure to use fire safeguards and proper ventilation when using alternate heat sources (i.e. fireplace, wood stove, space heater).

- Close off unneeded rooms, cover windows at night.

- Eat and drink. Food provides the body with energy for producing its own heat. Avoid dehydration.

- Wear layers of loose-fitting, lightweight clothing. Remove layers to prevent overheating, perspiration and subsequent chill.

AVOID OVEREXERTION !!!

(Most of this winter weather information courtesy of Winter Storms: The Deceptive Killers, a Preparedness Guide from the National Weather Service, in cooperation with the National Oceanic and Atmospheric Administration, and the American Red Cross.)

NWS Weather Data and Doppler Radar Images On The Go

George Sabbi KC2GLG
Deputy SKYWARN Coordinator, Bergen County NJ

Many of you are aware that you can use many cell phones as modems when they are connected to a laptop computer. You can access the latest updates on NWS weather products and Doppler radar images. What you might not know is that starting in December 2004, a web browser enabled cell phone can now directly access many NWS weather products and Doppler radar images.

Please note that the specific way that you configure your cell phone and its web browser to utilize these services may vary, as not all cell phone web browsers accept all symbols and characters. If you have issues, check with your service provider for more information. If you haven’t tried to access this yet, the information below is provided as a starting point.

The actual information that you can view on your cell phone is exactly the same text and images data that you currently see on your laptop or PC, but by using the Wireless Access Protocol (WAP), it is more easily distributed onto mobile devices such as PDA’s and cell phones. The site that is the central distribution location for the WAP data is through NWS Southern Region Headquarters (**http://www.srh.noaa/gov**).

The WAP links that you set up on a cell phone or PDA

are similar to those you use on your home PC, so the first link to set up is **http://www.srh.noaa.gov/wml**. Once you connect to this link, use the keys on your cell phone to enter the zip code for the town for which you want the latest weather info.

If your Browser (or the setup webpage for your browser) allows you to directly edit and store your own bookmarks, you can setup direct links to specific towns to see the latest weather information. Note: current observation data provided will be from the closest Automatic Surface Observation Station (ASOS). For example, if you want the current data and Forecasts for Ridgewood NJ, you set up this bookmark: **http://www.srh.noaa.gov/wml/wap_zc.php?zc=07450**. To make this work for your particular town or city, just change the last 5 digits to the zip code for your town.

For a direct link to the latest Doppler radar image from NWS Upton NY (KOKX), the link is **http://www.srh.noaa.gov/wml/waprad.php?radar=kokx**. To access an Image from another NWS radar, change the last 4 letters to the callsign for the radar you wish to see (i.e. for Fort Dix NJ, use *kdix* instead of *kokx*).

The NWS is seeking input on their new WAP Services. If you have set up this system on your cell phone or PDA, please send your thoughts on what you found to them so that the system can be further fine tuned and grown. Go to **http://www.srh.noaa.gov/cte.htm** to send comments. The comment deadline is February 28. *(Note: Always make safe and judicious use of a cell phone and always follow all local laws regarding proper operation in a moving vehicle.)*

"Ramsey Brigade" Joins FEMA Hurricane Effort

Mike Adams WA2MWT
SKYWARN Coordinator, Bergen County NJ

The request was received at the Ramsey OEM Emergency Operations Center, on the Sunday evening of Labor Day weekend. The Federal Emergency Management Agency (FEMA) was seeking local volunteers to assist in Florida, with the damage from Hurricanes Charley and Frances. The summons read:

"In coordination with the Department of Homeland Security's Citizen Corps and FEMA, you are being requested to deploy to Florida and potentially other affected states to respond to Hurricane Frances as a Community Relations Officer. You should travel from your home to Atlanta GA where you will be sworn in as a FEMA employee, receive orientation and training on Community Relations, and receive your assignment."

"Within 10 minutes of posting the government's request on the Ramsey OEM reflector group, one member came forward to volunteer," Adams relates. During the next couple of days, six Ramsey volunteers stepped forward. They represented Ramsey OEM, the Ramsey Fire Department and Ramsey Rescue Squad.

In order to qualify, each member had to commit to a 4 to 6 week field assignment, have written approval of his or her employer for extended stay, must be 25 years of age, a United States citizen who could complete a government background check, and had to be sponsored by the local Citizen Corps Council.

Other more stringent requirements included: must be physically able to work in a disaster area without refrigeration; work long hours under rigorous conditions; may be exposed to mold, high heat and humidity, and insects, and must be able to work in the vicinity of disaster debris damaged facilities and "related adverse conditions.'

"The conditions of employment did not faze this group one bit," Adams reported, "They were told for personal supplies to bring sunscreen, baseball caps, sun glasses, walking boots, "lots" of socks, mosquito repellant, several forms of identification and any medication needed. They would be issued government equipment (cell phones, blackberries, etc.), a DHS FEMA shirt and rain gear."

Once "The Ramsey Brigade" was trained in Atlanta, they moved out to Alabama, North Carolina, Mississippi and Ohio. Before they left, Homeland Security Director Tom Ridge stated, "The DHS/FEMA and Citizens Corps wish to thank the 2000 individuals who responded and were deployed from the first call for volunteers. As you are aware, 2 major hurricanes have impacted Florida and a third (Ivan), is expected to impact the Gulf States. FEMA will request assistance if this occurs or if other hurricanes strike."

The six Ramsey Community Relations Officers were then given their job description: Establish and maintain positive working relationships with disaster-affected communities and their citizens; collect and disseminate information and make referrals for appropriate assistance; identify potential issues within the community and report to appropriate authorities; convey a positive image of disaster operations to government officials, community organizations and the general public; and perform outreach with community leaders on available Federal Disaster Assistance.

Ramsey OEM and family members were able to stay in contact with the six volunteers throughout their deployment. The six reported a tremendous satisfaction of being of assistance, especially as federal employees. Their living conditions left a great deal to de desired, especially since hundreds of utility workers were occupying most of the nicer hotels and

motels. As with any large and rapid mobilization, there were frustrations and the entire contingent was asked to remain "FEMA-flexible."

Eighteen individuals from Bergen County were deployed, six from Ramsey," Adams concluded. "The residents of Ramsey and Bergen County should be proud of the efforts of its local volunteers who quickly answered the call to serve."

NWS Winter Weather Program Changes

Gary Conte
Warning Coordination Meteorologist, NWS Upton NY

On January 3, 2005, NWS Upton expanded its Winter Weather Advisory and Warning program suite to include the event specific winter weather advisories and winter storm warning products.

A full listing of winter weather program products is given below (new products listed in ***bold/italic***):

WATCH PRODUCTS

Winter Storm Watch
Blizzard Watch
Wind Chill Watch

WARNING PRODUCTS

Heavy Snow Warning
Winter Storm Warning
Ice Storm Warning
Blizzard Warning
Wind Chill Warning

ADVISORY PRODUCTS

Snow Advisory
Blowing Snow Advisory
Freezing Rain Advisory
Snow and Blowing Snow Advisory
Wind Chill Advisory
Winter Weather Advisory

The criteria for issuing event-specific winter weather products are based on whether a single winter weather precipitation type can be determined with a high level of confidence by the NWS forecast team. If the precipitation type cannot be determined with a high level of confidence, or more than one precipitation type is possible, the forecast team will issue a Winter Weather Advisory, or a Winter Storm Warning.

For a listing of all NWS Eastern Region Winter Weather Criteria, or for additional information on event specific winter weather program advisories and warnings in the NWS directives, check out the web links listed in the Links and Info Section.

If you have any questions or comments about our products...please contact Gary Conte (NWS Upton Warning Coordination Meteorologist). Contact info is also located in the Links and Info Section.

Parting Shots

First of all, thanks to the many spotters (and non-spotters) that submitted snowfall reports during the recent snowstorm (Jan. 22-23). Let me briefly address an issue that has come up (again) regarding our Public Information Statements (PNS).

We received over 570 email spotter reports, and an additional 100-plus phone call reports. This yielded approximately 800 spotter reports. We do quality control the reports, but occasionally a few erroneous reports "sneak in." Constructing the PNS product is time consuming, and we have other important duties that must take precedence. So, please do not take offense if your report is omitted… rest assured that it will be looked at during our post-storm analyses.

Spring (hopefully) is just around the corner. Pitchers and catchers report soon, which can only mean one thing...spring spotter training is almost here! We are working on the Spring 2005 schedule, and hope to have it posted to our web pages by mid-March, and in the next edition of the Microburst as well.

That's it for now. 73 de Scott KC2JCB

Links and Info

Featured Links from the Winter 2005 Microburst…
NOAA Climate Prediction Center
http://www.cpc.noaa.gov

NWS Upton NY Homepage and SKYWARN Pages
http://www.weather.gov/okx
http://www.weather.gov/okx/Skywarn/skywarn.html

NWS Upton NY Winter Weather Homepage
http://www.erh.noaa.gov/okx/winterweather.html

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